

Security Information

PROPOSED PROGRAM RESEARCH

25X1

(Fiscal Year 1953)

Submitted by:

Offices in DD/I Area

PART I - Proposed Extension of Projects to
Fiscal Year 1953

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PART II - Studies Suggested by:

A. ONE

B. OCI

C. ORR

D. OSI

TABS 1 - 17

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PART I - PROPOSED EXTENSION OF PROJECTS TO FISCAL YEAR 1953

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Study

Anticipated Status

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B. Machine Indexing Project

1. Status of current study

As originally planned, this study will extend into F.Y. 1953. The present target date for completion is 1 November 1952.

2. New aspects:

None. It should be stated however that while the project began originally as a general exploration in this field, it is now tailoring the system to meet individual requirements of CIA.

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PART II

A. STUDIES SUGGESTED BY ONE

<u>Studies</u>	<u>Description of Points to be Covered</u>
1. Soviet Estimate of Probable U.S. Intentions	Kremlin's evaluation of probable (TAB 1) U.S. and Western courses of action, particularly with respect to initia- ting a war during the next two-four years.
2. Analysis of Long-Range Indicators of Soviet Courses of Action	Examination of certain past (TAB 2) Soviet domestic policies and actions in relation to subsequent Soviet foreign courses of action. It is hoped that such a study would assist long-range predictions.
3. Indicators of Sino-Soviet Relations	Search for clues in the state of (TAB 3) Sino-Soviet relations through study of relative Soviet and Chinese influences in Communist parties in Asia.
4. Factors Determining Soviet Bloc Policy	Analysis of motivating factors, (TAB 4) specifically ideological ones, which influence or determine Soviet Bloc foreign policy.

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PART II

B. STUDIES SUGGESTED BY OCI

Studies

Description of Points to be Covered

1. Analysis of World-Wide Communist Propaganda Since the end of War

To determine the pattern of Soviet (TAB 5) moral denunciations of the West. Their relation to Western events and subsequent effects on Soviet policies and action

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PART II

C. STUDIES SUGGESTED BY ORR

<u>Studies</u>	<u>Description of Points to be Covered</u>
1. Analysis of the Organization of and Controls Within the Soviet Economy	It is hoped that this study would (TAB 7) point to certain vulnerabilities of Soviet economic structure to disruption.
2. Input - Output Index in Soviet Economy	Examination of prewar Soviet (TAB 8) statistics for the purpose of determining the interindustry relationships and to provide a basis for current Soviet economic studies.
3. Essential Non-Economic Attributes of Successful Aggressor Nations	Examination of factors which (TAB 9) enabled economically inferior nations in the past to acquire control over richer and more highly civilized peoples. To apply such criteria to USSR in order to assess properly the magnitude of the Soviet threat.

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PART II

D. STUDIES SUGGESTED BY OSI

<u>Studies</u>	<u>Description of Points to be Covered</u>
1. Scientific and Technical Methods for the Collection of Intelligence Information	Search for new scientific and technical methods for the collection of intelligence information through a general survey of existing methods. (TAB 10)
2. Methodology for Forecasting in Scientific Intelligence	A systematic study of the nature of scientific and technological trends with special emphasis on those in USSR in order to evolve basic principles, concepts and methods required to forecast future developments in USSR. (TAB 11)
3. Anomalous Propagation	To survey current state of knowledge in USA and abroad on anomalous propagation and its applicability to the field of electronic intercept. (TAB 12)
4. Mechanical Translation	To design and construct an automatic mechanical translation machine, which, if available, would resolve the most important bottleneck - translation of foreign material. (TAB 13)
5. Significant Trends in Soviet Mathematics	To determine the significant trends in Soviet mathematics and their applicability to such critical phases of research, development and design of atomic energy, etc. (TAB 14)
6. A system of Numerical Portrayals of Air Defense Capabilities	To develop a numerical method for measuring the air defense capabilities of an individual nation and to permit comparisons of defensive and offensive capabilities of any other nation. (TAB 15)
7. Factors Influencing Research and Development and its Reduction to Practice in a State Controlled Economy	This would involve a broad study which would focus attention on major factors in the USSR which influence their research and development effort in general and specifically in the chemical industry. (TAB 16)

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PART II

D. STUDIES SUGGESTED BY OSI (Continued)

Description of Points to be Covered

8. Apparatus Used in
Medical Research

This study of medical devices (TAB 17)
(other than those in common use)
is needed for guidance in analysis
of Soviet medical research.

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TAB 1

RESEARCH PROPOSAL

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SOVIET ESTIMATE OF PROBABLE U.S. INTENTIONS

A study on this subject would cover what the Kremlin would think, in the light of Communist preconceptions, the U. S. and the West were likely to do over the next two-four years, with particular reference to whether the Kremlin would think the U. S. and the West were likely to initiate a war against the USSR. It would be substantially a "think-piece," although supporting research into current Soviet statements and Soviet history might be useful.

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*Useful-
not available
internally because
of limitations on
study of ourselves*

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TAB 2

RESEARCH PROPOSAL

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ANALYSIS OF LONG-RANGE INDICATORS
OF SOVIET COURSES OF ACTION

This study would take basic Soviet policies and actions in selected fields and attempt to relate them to Soviet foreign courses of action. The study would begin by analyzing the shifts in Soviet capital investment, educational, and other programs produced by the deepening fear of war in the years preceding June 1941. It would then analyze similar Soviet actions in the years since 1945 in an effort to see whether similar shifts are taking place. Even if the second part of the study yielded no significant results, the first part would assist prediction over longer periods than the usual intelligence "indicators."

Excellent

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TAB 3

RESEARCH PROPOSAL

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INDICATORS OF SINO-SOVIET RELATIONS

It is believed that important clues to the state of Sino-Soviet relations may be found through detailed study of relative Chinese and Russian influence in Communist Parties in India, Japan, and perhaps Indochina.

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TAB 4

RESEARCH PROPOSAL

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FACTORS DETERMINING SOVIET BLOC POLICY

1. Scope of the study would be to (a) prepare an analysis of the nature of those factors that influence or determine the formulation and execution of Soviet Bloc policy and (b) estimate to what extent and for what reason such factors are taken into account by Communist leaders.

2. Particular emphases should be given to determining the extent of the influence of Communist ideology upon Soviet Bloc attitudes and actions, although it is recognized that considerations other than ideological play a role in the Kremlin's decisions.

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*Query
too broad &
vague - could
ONE without
obscuring its own function
rely upon any
answer supplied*

TAB 5

RESEARCH PROPOSAL

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ANALYSIS OF WORLD-WIDE
COMMUNIST PROPAGANDA SINCE THE END OF WAR

1. This study could determine the pattern of Soviet moral denunciations of the West, relation of this pattern to Western actions and events and to Soviet actions and policy.

2. The following suggestions are offered:

a. Reconstruction with summary compilation and chronological presentation on world-wide basis of major Soviet propaganda campaigns since 1944. Study to contain particular emphasis on development, phases, and character of Soviet peace and signature campaigns since 1949.

b. Study to examine the following:

(1) Progressive characterization of U. S. as Evil in intent and act.

(2) Relation of this progressive characterization to standard "base note" of Communist doctrinal moral denunciations of Capitalist West.

(3) Audience for which any given theme was intended, i.e., BW - primarily for Chinese?

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Good

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TAB 7

RESEARCH PROPOSAL

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ANALYSIS OF THE ORGANIZATION OF
AND CONTROLS WITHIN THE SOVIET ECONOMY

A proposed study of the Soviet economic structure from the point of view of its organization. It is believed that this project would examine controls and tensions in the Soviet system which are susceptible to disruption from both within and outside.

Is it OK?
during just
then?

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TAB 8

RESEARCH PROPOSAL

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INPUT - OUTPUT INDEX IN SOVIET ECONOMY

1. Input - output study based on prewar Soviet statistics to show the interindustry relationships and to provide a basis for current studies of Soviet economic capability.

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TAB 9

RESEARCH PROPOSAL

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ESSENTIAL NON-ECONOMIC ATTRIBUTES
OF SUCCESSFUL AGGRESSOR NATIONS

To mobilize the resources of the historical profession on a highly selective basis to study in reasonable breadth and depth a representative number of instances in which races or nations with obvious economic inferiority were able to wage successful wars of conquest leading to political control of reasonable duration over richer and more highly civilized peoples. The purpose of this study should be to extract common qualities of phenomena, physiological, moral, organizational, etc., that enabled the conquerors to achieve the maximum military success with limited economic resources and scientific skills. It might then be interesting to apply these criteria to Russia today in order to get an additional and more subtle appreciation of the magnitude of the threat posed by her than is possible from appraisal only of her order of battle and economic capacity.

Borderline

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TAB 10

RESEARCH PROPOSAL

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SCIENTIFIC AND TECHNICAL METHODS
FOR THE COLLECTION OF INTELLIGENCE INFORMATION

1. Until quite recently intelligence collection has been largely based upon conventional methods which include the use of covert agent nets, military attache reporting, diplomatic reporting, exploitation of press, exploitation of radio broadcasts, and exploitation of foreign specialized and trade publication. During and since the war, the resources of private individuals and of U.S. institutions and industrial enterprises have been tapped. Also, certain scientific methods including such things as noise listening, etc., have been put to profitable collection use.

2. While all these means have been profitable in varying degrees, it is quite possible that there are other scientific and technical methods for collecting information which are now possible, but which are not being used. A study which would survey present methods might isolate others which could be used to increase our flow of information.

*What does
OSI do?*

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TAB 11

RESEARCH PROPOSAL

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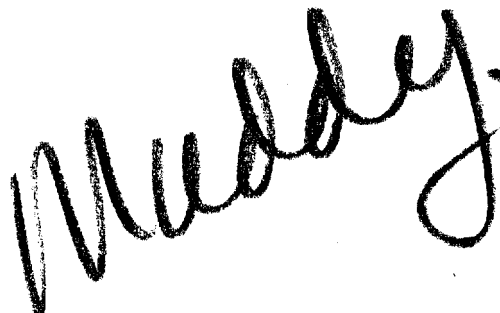
METHODOLOGY FOR FORECASTING
IN SCIENTIFIC INTELLIGENCE

1. This project would be designed to meet the urgent need of the intelligence community for a reliable basis for estimating the Soviet potential in scientific and technological developments directly applicable to the USSR military potential. It is one of the primary missions of OSI to estimate what munitions, weapons systems, and tactics will be used by potential enemies two, three, five or ten years from the present, based in large part upon forecasting ability. Thus, it is proposed that a systematic study be made of the known Soviet scientific and technological trends and capabilities in order to evolve the basic intelligence principles, concepts, procedures and methods required to determine the future military and technological developments of the USSR. Admittedly, statistical analysis will have a place in any such studies, including an estimate of the reliability of the results.

2. Studies have been made upon forecasting methods in a limited number of fields in the social sciences, including business activity, prices, population changes, etc. Very little critical study has been devoted to methods for forecasting in intelligence, although some studies are being conducted by the Rand Corporation in the economic field. A prototype project has been under consideration for the past six months by a small group in this Division

The conclusion of this group is that additional, and highly qualified personnel would be required for the project, properly supported by the intelligence specialists of OSI.

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TAB 12

RESEARCH PROPOSAL [REDACTED]

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ANOMALOUS PROPAGATION

1. The above project was originally initiated in November 19, 1951, at which time it was agreed that OSI would undertake immediately a survey of the current state of knowledge in the USA and abroad on anomalous propagation and its applicability to the field of electronic intercept. [REDACTED]

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[REDACTED] prepare a review of the activities and the state of knowledge on anomalous propagation both in the United States and abroad. [REDACTED]

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Good

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TAB 13

RESEARCH PROPOSAL

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MECHANICAL TRANSLATION

1. This project is in the nature of extension and supplement to It is proposed to design and construct an automatic mechanical translation machine based on the principle that a limited vocabulary, both basic and technical, could supply 95% or better of seriation translation. Such a translation machine, if available, would resolve the most important bottleneck of the intelligence community, namely translation of foreign documents in the absence of adequate cadres of qualified translators.

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TAB 14

RESEARCH PROPOSAL

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SIGNIFICANT TRENDS IN SOVIET MATHEMATICS

1. In view of the recognized Soviet strength in the field of mathematics and importance of this in scientific research and development, it is proposed to establish a project to determine the significant trends in Soviet mathematics and their applicability to such critical phases of research, development and design as atomic energy, cosmic rays, computers, telemetering, and other physics and electronics fields.

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*Why Soviet
OS do their
directly?*

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TAB 15

RESEARCH PROPOSAL

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A SYSTEM OF NUMERICAL PORTRAYALS
OF AIR DEFENSE CAPABILITIES

1. To portray the over-all defensive capabilities of an individual nation in a numerical manner which would allow comparisons with the defensive figures or offensive capabilities of any other nations; to establish a numerical system, applying percentage factors which would be representative of various defensive measures, so that a single Defensive Index Number could be attained which would be a total of all sub-measures of air defense.

2. It is axiomatic that all governments, within their economic and geographic capabilities, aim toward perfection in national defense. It is obvious, however, that no nation has ever attained that position, but that all nations have some measures of defense against air attack which could be expressed as de facto percentages of a hypothetically effective air defense. For the purposes of this problem, therefore, the scales are based upon a definition as follows: An over-all Defensive Index Number of "100%" means an effective defense (ability to cause prohibitive rates of attrition upon attacking air forces or weapons) against air attack on any scale possible within national economies of any potential enemies or groupments, with any known weapons.

3. The whole being equal to the sum of all its parts, it is apparent that, in order to obtain an over-all Defensive Index Number, the various possible defensive sub-measures must be scored.

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select an index - which
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view - of for scale
alertness

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TAB 16

RESEARCH PROPOSAL

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FACTORS INFLUENCING RESEARCH AND DEVELOPMENT
AND ITS REDUCTION TO PRACTICE IN A
STATE-CONTROLLED ECONOMY

1. This study would assess the factors that influence the direction of research and development, and the selection of the results of such research and development for reduction to practice, under a system of state-control (USSR) as contrasted with the free enterprise system of the West.

2. In appraising the research and development capabilities of the USSR, it is important to understand the nature of their scientific research and development effort in prerevolutionary days, and then the changes that have since been introduced. The present capabilities of USSR research and development are dependent upon the success which the Government has had, within the time between the revolution and the present, to develop not only capable instructors but also the number of capable men required to carry out the large amount of research and development which has been necessary to expand their industry. Study of the published literature and discussions with individuals familiar with research in Russia before the revolution will provide authoritative information on the character of prerevolutionary research. Items contributing would be the influence of Western research through training of Russian scientists, general aspects of social and economic conditions of scientists in Russia, the relation of Russian scientists to Russian industry as it existed then, and the like.

3. The general phase of this study would thus examine carefully the evolution of research and development in the USSR from prerevolutionary to its Marxist character. The following items should be considered in this evaluation:

a. Propaganda designed to convert scientists to the Marxist principle, including consideration of the major personalities responsible, and their successes and failures in these efforts.

b. Capacity, equipment, and facilities for training scientific personnel; the quality of training, including the character of instructors and the numbers in various categories, such as technicians, undergraduate, and graduate.

c. Principal centers of training.

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FACTORS INFLUENCING RESEARCH AND DEVELOPMENT
AND ITS REDUCTION TO PRACTICE IN A STATE-CONTROLLED
ECONOMY (Continued)

- d. Originality of research work and ideas.
- e. Organization for research and development.
- f. Institutions for specialized research.
- g. Relations of scientific organizations with specific industries.
- h. Methods for translating research results to commercial application.

4. As a specialized phase, it is proposed that a detailed study be further pursued in the field of chemistry, taking into account the special technical, economic, and social problems that are involved. This would include especially those factors contributing to the cost of producing various classes of important chemicals and influencing the decisions to manufacture such chemicals.

*Agout
What is on
doing?*

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TAB 17

RESEARCH PROPOSAL

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APPARATUS USED IN MEDICAL RESEARCH

1. OSI would like to have information concerning devices, other than those in common use, which could be used in medical research such as electron microscope; television tube in ultra-violet microscopy and roentgenology; and ultrasonic, sonic, and subsonic rays as they may affect man or bacteria.

2. What would be considered good clues from development or production of materials, or parts assembly, which might serve as indicators that the Soviets are producing the electroencephalograph; the polygraph (not apparatus known by this name for printing purposes); the electron microscope; photographic materials for the study of cosmic rays; and special electric bulbs and vacuum tubes used in apparatus for diagnostic and therapeutic purposes (oesophagoscope, cystoscope, etc.)

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the 100 of
Gardner

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